REPORT RESUMES

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START YOUR CAREER WITH APPRENTICESHIP IN WASHINGTON, D.C.

DISTRICT OF COLUMBIA EMPLOYMENT SERVICE

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DESCRIPTORS- *OCCUPATIONAL INFORMATION, *APPRENTICESHIPS, OCCUPATIONAL GUIDANCE, *SKILLED OCCUPATIONS, OCCUPATIONAL CHOICE, TRADE AND INDUSTRIAL EDUCATION,

THIS GUIDE DESCRIBING 21 APPRENTICEABLE TRADES IS FOR USE BY COUNSELORS AND OTHERS WHO COME IN CONTACT WITH YOUNG PEOPLE BOTH DURING AND AFTER THEIR SCHOOL YEARS. TO QUALIFY FOR APPRENTICESHIP IN ANY OF THE SKILLED TRADES, A YOUNG MAN OR WOMAN MUST HAVE MECHANICAL APTITUDE AND ABILITY, AND TO BE SUCCESSFUL MUST HAVE PERSEVERANCE, AMBITION, AND INITIATIVE. THE APPRENTICE TRAINING PROGRAM IS SUPERVISED BY A LOCAL JOINT APPRENTICESHIP COMMITTEE FOLLOWING STANDARDS DEVELOPED WITH THE ASSISTANCE OF CONSULTANTS FROM THE BUREAU OF APPRENTICESHIP AND TRAINING AND REGISTERED WITH THE APPRENTICESHIP COUNCIL. MOST PROGRAMS ARE FOR 4 YEARS. APPRENTICES USUALLY RECEIVE 50 PERCENT OF JOURNEYMAN'S WAGE AND INCREASES AT REGULAR INTERVALS. IN MOST CASES THEY ATTEND CLASSES AT NIGHT 4 HOURS EACH WEEK FOR AT LEAST 144 HOURS A YEAR. DAILY JOB INSTRUCTION IS UNDER THE SUPERVISION OF A SKILLED JOURNEYMAN. A YOUNG PERSON INTERESTED IN APPRENTICESHIP SHOULD (1) SELECT A TRADE FOR WHICH HE HAS APTITUDE AND PHYSICAL ABILITY, (2) FIND OUT IF HE MEETS THE MINIMUM QUALIFICATIONS FOR THAT TRADE, (3) DECIDE WHETHER HE CAN WORK UNDER THE JOB CONDITIONS OF THAT TRADE, (4) OBTAIN INFORMATION ON THE SPECIFIC PROCEDURES FOR MAKING APPLICATION, (5) TAKE THE APTITUDE OR OTHER TESTS WHERE REQUIRED, AND (6) IF THE JOINT APPRENTICESHIP COUNCIL HAS A WAITING LIST OF APPLICANTS, DETERMINE WHETHER OR NOT HE IS SUFFICIENTLY INTERESTED IN THE TRADE TO WAIT FOR AN OPENING OR WHETHER HE SHOULD SEEK OTHER EMPLOYMENT. INFORMATION PRESENTED FOR THE APPRENTICEABLE TRADES INCLUDES THE NATURE OF THE WORK, TOOLS USED, PLACE EMPLOYED, WORKING CONDITIONS, HELPFUL HIGH SCHOOL COURSES, GEOGRAPHIC AREA OF EMPLOYMENT, EMPLOYMENT PROSPECTS, APPLICANT REQUIREMENTS, DESIRABLE QUALIFICATIONS, CONDITIONS OF APPRENTICESHIP, AND SPECIFIC PLACES TO APPLY FOR APPRENTICESHIP. (HC)

START YOUR CAREER WITH APPRENTICESHIP

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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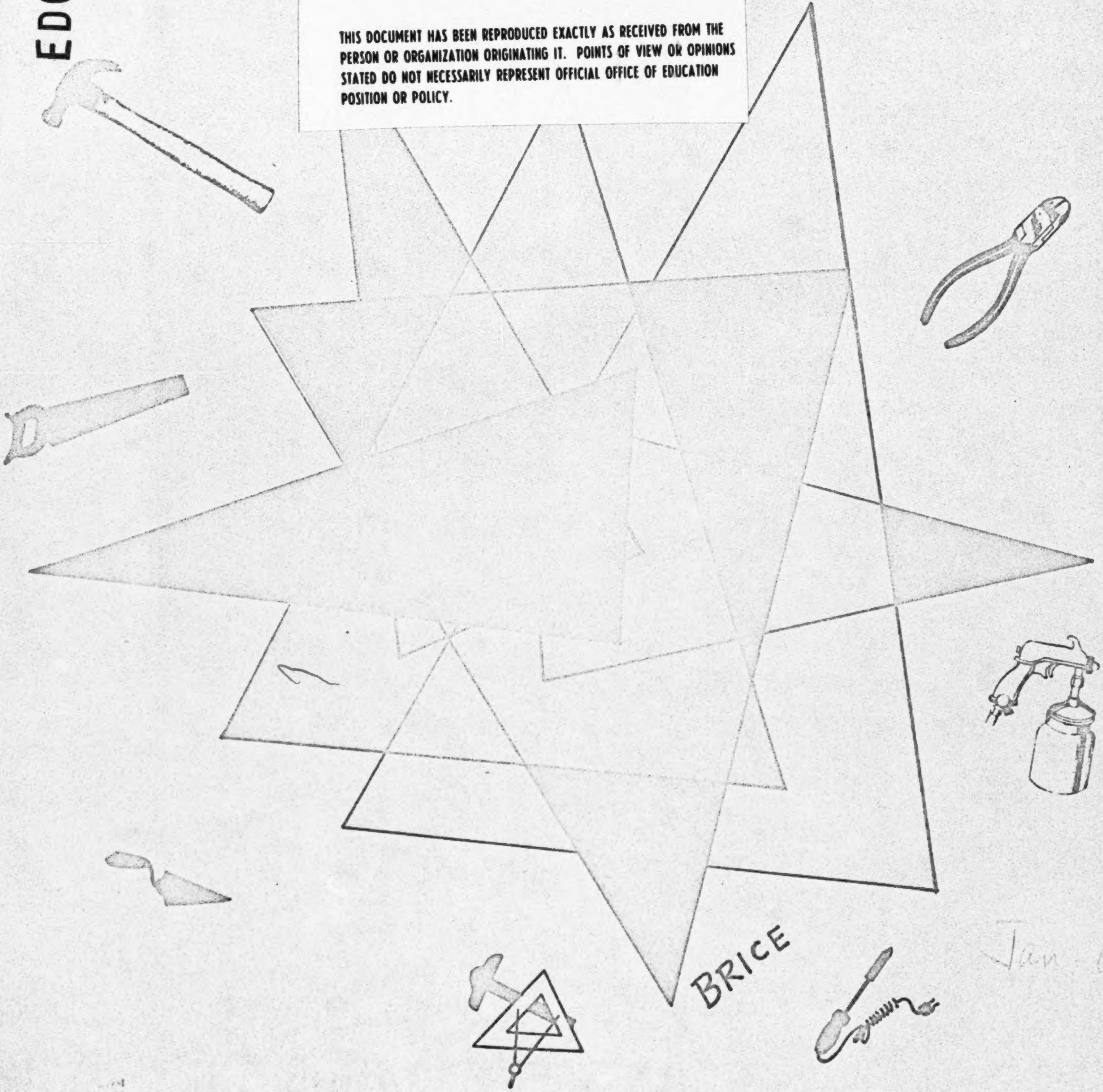

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IN WASHINGTON D.C.

ACKNOWLEDGEMENTS

COVER:

Art work voluntarily contributed by Bernard Brice, twenty-two year old applicant to Apprenticeship Information Center, Washington, D.C., who completed bricklayer's training program under Bricklayers #4 JAC.

CONTENT:

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INTRODUCTION

Today's world of work requires more specific skills than ever before and the young persons who enter and complete apprenticeships will be among the future leaders in industry and commerce in their communities. Yet too little is known by our young people of the opportunities in apprenticeship for those who will qualify themselves. In many cases high school graduation and a simple aptitude for a certain craft are sufficient qualifications, but a tremendous advantage may be gained if the youth at the junior or senior high school level will concentrate on certain courses rather than just "getting through" them.

This guide is intended for use by counselors and others who come in contact with young people both during and after their school years. It is the hope that with the proper information and guidance more young people will better understand the prerequisities for careers as skilled craftsmen while still in school and will therefore better prepare themselves by concentrating on courses which will most benefit them in following such careers.

In terms of earning ability and job satisfaction the journeyman craftsman rates high. Opportunities for further advancement are always present and the experience of thousands of apprentices who have completed their training in the past twenty-five years amply demonstrates the wisdom of their earlier perseverance. Skilled workers generally earn at least thirty-five per cent more than unskilled workers and can be assured of steadier employment throughout their working lives.

Qualified youths should be made aware while still in school of the many opportunities apprenticeship offers them and the doorway it opens to future advancement. School courses can be more meaningful if the young person understands how they will be applied to his entire working life. Sound basic preparation is needed because of the increasing complexity of skilled occupations. Trades are not interested in under-achievers.

In order that counselors may effectively guide qualified youth in their thinking toward apprenticeship, general outlines are given herein for the major trades and trade groupings in which apprentices are being trained in D.C. area and therefore where the most opportunities exist for apprentice openings. The descriptions are broad and general and are meant only to give the basic information needed for both counselors and prospective apprentices.

GENERAL INFORMATION

Recognizing that occupational counselors have a complex problem in counseling the youth with whom they have contact, this material has been compiled to furnish some of the more important data with respect to on-the-job and other conditions in the crafts. As detailed job studies and craft training guides may be found elsewhere (see the Dictionary of Occupational Titles) the job duties described here are principally briefs.

Specific information is available in each local area as to entrance requirements, desirable qualifications, application procedures, wage rates, etc., since there is a wide variation in these factors even in the same trade in different areas.

DESCRIPTION OF APPRENTICESHIP

Apprenticeship is a system of learning while earning, and "learning by doing." It combines training on the job with related and supplemental instruction at school. Today, it is utilized chiefly in the skilled crafts. Each program operates under apprenticeship training standards agreed to by labor and management in accordance with D.C. and Federal laws, under which a young person works with a skilled journeyman and gains from him on the job his skill and "know-how" and in turn becomes as important part of his trade and industry. In those crafts in which management and labor organizations exist, each selects an equal number of members of the joint apprenticeship committee. The joint apprenticeship committee determines the standards for training of its craft and supervises the training of apprentices.

In many cases the local joint apprenticeship committees have guidelines in the form of national and/or statewide standards recommended by the parent organizations. But these are minimums and the local groups usually have complete autonomy in developing and administering their own programs.

QUALIFICATIONS FOR APPRENTICESHIP

To qualify for apprenticeship in any of the skilled trades, a young man or woman must have mechanical aptitude and ability. To be successful he must have perseverance, ambition, and initiative. Like a college education, the successful completion of an apprenticeship term does not come easily, but is the result of hard work on the part of the apprentice.

In practically every skilled trade more than fundamental knowledge of arithmetic is essential. The ability to read, write and speak well is beneficial in any walk of life, but in some apprenticeship occupations it is more important than in others. In some trades the young person seeking apprenticeship will be at a decided advantage if he has taken shop courses, has some knowledge of mechanical drawing, physics, blueprint reading, drafting, higher mathematics, chemistry, electricity, welding or the like. Physical fitness, a good sense of balance, eye-hand coordination, color sense, agility, strength, ability to work at heights and mechanical aptitude are desirable qualifications in many trades and one or more of these are essential in others. Ability to work with others, good personality, and neat appearance are necessary in most trades and particularly where contact with the public is involved.

Apprentices are usually between eighteen and twenty-five years of age. High school graduates are preferred, with a major in mathematics, shops, or the physical sciences. A prospective craftsman likes to work with his hands and to use various tools to build and repair things. He likes to finish things once he starts them and doesn't care how dirty or greasy the job as long as he gets it done. He enjoys visits to shops and factories and likes to talk to mechanics and tradesmen about the jobs they do and about the problems they meet in their work. In school he gets along well in shop, science, mathematics and mechanical drawing classes, and enjoys working on practical problems in the classroom and at home.

These are only some of the factors which may indicate craftsmanship ability.

HOW THE PROGRAM OPERATES

The training is supervised by a joint apprenticeship committee (JAC)--sometimes called joint apprenticeship and training committee.

Training is "spelled out" in apprenticeship standards developed by the local JAC, with the assistance of consultants of the D.C. field office of the Bureau of Apprenticeship and Training and registered with the D.C. Apprenticeship Council. The processes of the trade and the number of hours to be spent learning each process are defined.

The period of training is from 2 to 6 years, depending upon the trade. Most programs are for 4 years.

Apprentices start at a percentage of the journeyman's wage and receive increases at regular intervals. Starting rates are usually 50% or higher, and increases are given every six months in most trades.

Apprentices attend classes of related technical instruction, supplementing the training on the job, which gives each apprentice a comprehensive understanding of the theoretical aspects of his work. Related instruction is one of the fundamental features of apprenticeship and has been developed and accepted as standard practice in every trade. In most cases this means attending classes at night 4 hours each week, for at least 144 hours a year. The instruction includes such subjects as safety laws and regulations, mathematics, craftsmanship, blueprint reading and other sciences connected with the trade.

In class apprentices learn the theories of their trade; each day on the job they learn its practice, under the supervision of skilled journeymen. Instruction in the use of the tools of the trade is also given apprentices early in their training; in most trades they are not allowed to use any power-driven machinery until well advanced in their training. Apprentices are usually required to furnish their own hand tools.

Each apprentice signs an apprenticeship agreement either with a JAC or an individual employer. This agreement is registered with the Bureau of Apprenticeship Training.

In a number of trades and industries apprentices receive, in addition to their regular wages, fringe benefits covering vacation pay, health and welfare, pensions, ets. Through collective bargaining in a number of instances, employer also pay certain regular amounts into apprenticeship funds which are administered by boards of trustees. Coordinators of apprenticeship and field representatives are employed by these boards to supervise the training of apprentices in a given trade or area, process apprentice applications, keep records of progress, and the like. Where field offices and staffs have been established, they have been of great value to the JACs, apprentices and the industry.

Industry coordinators and apprenticeship consultants of the Bureau of Apprenticeship Training visit establishments to determine on-the-job progress of apprentices, seek new apprenticeship openings, and discuss problems with apprentices, foremen and employers.

The role of the Bureau of Apprenticeship Training is consultative and developmental. The field and technical staffs of the division assist management, labor and JACs by seeking to promote and develop additional training programs, by providing technical data through research on current trends and training practices to improve and enlarge existing programs, and by serving as the registration and certification agency for apprenticeship in D.C.

Operational policy is based upon Commissioner's Order 19 and Title 7 of the Civil Rights Act. Apprenticeship is made available to qualified youth regardless of race, creed or color.

The role of the Apprenticeship Information Center is to inform and counsel youth on apprenticeship opportunities and to refer persons interested in becoming apprentices to employers and joint labor-management apprenticeship committees. The Center contains apprenticeship information which is available to youth, schools, guidance departments, minority groups, labor unions, and employer associations, as well as the general public. Individual and group counseling are available for apprentice applicants and emphasis is on locating job openings in apprenticeable trades.

The District of Columbia Apprenticeship Council has given its full endorsement and support to the Apprenticeship Information Center. It will help promote apprenticeship opportunities for all segments of the population through the Center.

STEPS AN APPRENTICE APPLICANT SHOULD TAKE

1. Select a trade for which he has an aptitude or some previous experience and the physical ability to perform.

2. Find out if he meets the minimum qualifications for that trade.

3. Decide whether he can work under the job conditions of that trade, some of which may be hazardous, dirty, uncomfortable or otherwise unpleasant.

4. Apply at Apprenticeship Information Center, where he can obtain information there as to the specific recommended procedure for making application in that trade and area.

5. Take aptitude or other tests where required.

6. If the JAC has a waiting list of applicants, determine whether or not he is sufficiently interested in the trade to wait for an opening, or whether he should seek other employment. In some trades the JAC encourages applicants to find their own employers and will add to their approved list any firm which is qualified to give the training and which is willing to hire an apprentice.

Note: The leaflet, "Is There an Apprenticeship in Your Future", published by the Apprenticeship Information Center, may be helpful. Supplies are available for counselors.

AUTO BODY AND FENDER REPAIRMAN

NATURE OF WORK:

Removes dents in automobile bodies and fenders by hammering one side of the dent with a properly shaped ding or dolly hammer while holding a ding or dolly block on the opposite side until the dents are hammered out. Smooths the hammered area by filing, grinding, or sanding with a heavy-duty disc or portable sander. Fills rough areas with solder or plastic if hammering and filing will not remove dents; then files or sands until area is smooth and blends with adjacent surface. When necessary, replaces metal tops and panels and aligns bodies and frames. Installs window glass and windshields, removes and replaces upholstery, removes old fenders and installs new ones. Welds breaks in body metal and files welds smooth to conform to adjacent areas. In smaller shops may be called upon to estimate repair jobs.

TOOLS USED:

Personally owned tools include metal hammers, ding and dolly blocks, spoons, file holders, soldering paddles, wrenches, and safety goggles. The employer furnishes files, electric sanders, hydraulic power jacks, welding equipment and pneumatic hammers.

WHERE EMPLOYED:

By automobile dealers, service garages, and body and fender specialty shops.

WORKING CONDITIONS:

Customarily works indoors under varying conditions, always noisy. Larger shops usually have clean, well-lighted, and ventilated work areas. Smaller shops or garages may have cluttered work areas and other working conditions may be less favorable. May receive cuts from ragged metal parts, or burns from hot metal in making welding repairs. Considerable bending, stooping, and lifting (up to 75 pounds) is usual in the work. Normal good health, good eyesight and form perception, manual dexterity, eye-hand coordination and minor physical limitations are usual requirements, although deaf-mute workers are accepted by some employers.

HELPFUL HIGH SCHOOL COURSES:

Mathematics- Commercial arithmetic and business math
Welding
Metal shop
Mechanical drawing

Auto Body and Fender Repairman

Area:

Metropolitan Washington area.

Employment Prospects:

Reasonably steady throughout the year.

Requirements for Apprentice Applicants:

Age: 18 through 24 years.

Desirable Qualifications for Applicants:

High School graduate.
Familiarity with tools.
Manual dexterity and eye-hand coordination.

Conditions of Apprenticeship:

Length: 4 years - 40 hours per week
Wages: Starting - Usually 60% of journeyman wage.
Increase every 6 months.

Related Instruction: A minimum of 144 hours per year.

Where to Apply for Apprenticeship:

Apprenticeship Information Center
201 6th St., N.W., Room 329
Washington, D.C.

or

Auto Mechanics (IAM-AW)
#1486 Joint Apprenticeship Committee
1309 Rhode Island Ave., N.E.
Washington, D.C.

AUTO MECHANIC

NATURE OF WORK:

Repairs and maintains the most complex and the most expensive piece of machinery commonly owned by an American citizen. He must be an all-around mechanic able to handle the wide range of jobs brought to the general repair shop, from a simple engine tune-up to the complete disassembly and repair of the automobile's power train. On completion of training, because of special skill or because of tradition within the shop, he may spend most of his time on one or two specialties. In any event, most shops work on either domestic cars only, or on imported cars only. Many shops further specialize in repairing the cars of only one manufacturer or by doing only one kind of repair work, such as brakes, exhaust systems, body work, or engine rebuilding.

TOOLS USED:

Wrenches, screw drivers, lathes, valve grinders, drills, micrometers, and guages in addition to electrical equipment such as timing lights, ohmeters, and generator armature growlers; complex electronic testing equipment. An initial expenditure of about $25.00 to $60.00 for tools is frequently required of the beginning apprentice.

WHERE EMPLOYED:

By auto dealers and truck dealers and independent repair garages. Sometimes by vehicle fleet operators, government agencies and service stations.

WORKING CONDITIONS:

Repair shops are sometimes noisy and the mechanic frequently works in cramped quarters and awkward positions. Hazards include exposure to fumes, burns from hot metal surfaces, cuts from sharp-edged tools and parts, and allergies resulting from contact with lubricants or solvents. However, getting covered by grease and dirt is the most common objection to the occupation. Although hoists and jacks are available for moving equipment, a mechanic often lifts heavy parts. Good eyesight and hearing are essential.

HELPFUL HIGH SCHOOL COURSES:

Shop mathematics
Auto shop
Basic electricity
Blueprint reading

Auto Mechanic

Area:

Metropolitan Washington area.

Employment Prospects:

Fairly steady throughout the year.

Requirements for Apprenticeship Applicants:

Age: 18 through 24

Desirable Qualifications of Applicants:

High School graduate
Familiarity with tools
Manual dexterity and eye-hand coordination

Conditions of Apprenticeship:

Length: 4 years - 40 hours per week
Wages: Starting - usually 60% of journeyman wages.
Increase every 6 months.

Related Instruction: A minimum of 144 hours per year.

Where to Apply for Apprenticeship:

Apprenticeship Information Center
201 6th St., N.W. Rm 329
Washington, D.C.

or

Auto Mechanics (IAM-AW) #1486, Joint Apprenticeship Committee
1809 Rhode Island Ave., N.E., Washington, D.C.

NATURE OF WORK:

Cuts hair according to instruction of customer, or according to original style, shaping neck line with comb and scissors or clippers. Usually shaves customer's neck. May shampoo, dry and recomb hair, applying tonic on request. Gives scalp treatments. Serves male customers by shaving or trimming beards and mustaches. May give facial massages. May perform other personal services incidental to barbering, such as removing surplus hair from eyebrows, nostrils, and ears. In some shops, may tint or dye hair.

WORKING CONDITIONS:

Works, usually with others, in clean, well-lighted shops. Must be able to stand for long periods of time.

REQUIREMENTS:

Must complete a course of instruction of not less than 1,000 hours at a barber school approved by the D.C. Board of Barber Examiners and file for and satisfactorily pass an examination scheduled by the Board. Applicant must prepare in duplicate a duly verified application obtained from the school or Board. In order to practice as a registered apprentice, the applicant must be 17½ years of age, of good moral character and temperate habits. Neatness, high degree of manual dexterity and eye-hand coordination are desirable qualities.

HELPFUL HIGH SCHOOL COURSES:

Business arithmetic
English
Business management
Salesmanship

Barber

Area:

Metropolitan Washington area.

Employment Prospects:

Employment is stable with openings for the better qualified graduates of the barber schools. Most openings will be for replacement needs. Turnover amoung young barbers is quite high.

Conditions of Apprenticeship

Length: 2 years after completion of barber school

Wages: Starting: Usually 70% of gross receipts (guaranteed $80.00 per week)
Increases to $95.00 guarantee per week after 12 months.
Journeyman wage: 70% of gross receipts (guaranteed $95.00 per week). Effective 8/1/66

Where to Apply for Apprenticeship:

Following completion of barber school and being certificated by the D.C. Barbering Board, apprentices apply directly with employer. Or Apprenticeship Information Center, 201 6th Street, N.W., Room 329, Washington, D.C.

BRICKLAYER

NATURE OF WORK:

Constructs walls, partitions, fireplaces, chimneys, and other structures from brick, concrete, cinder gypsum block structural tile, or terra cotta. Installs brick linings of industrial kilns and furnaces. Spreads a layer or "bed" of soft mortar, applies mortar to the end of the brick to be laid, places the brick on the bed of mortar and works it into the desired position with his hand, then cuts off excess mortar. When necessary, breaks bricks with a trowel or brick hammer to fit spaces too small for whole bricks. Keeps the rows of brick level by using a tightly stretched horizontal cord (gage line) as a guide. At fixed points along the wall, checks the surface with a mason's level or to plumb line to make sure the bricks are lined up. Trims the mortar between the bricks to achieve a neat appearance.

TOOLS USED:

Chisels, trowels, jointers, and tuck pointers (a special finishing tool used to shape mortar joints), bricklayer's hammers, gage lines, plumb bobs, and mason's levels.

WHERE EMPLOYED:

The great majority work mainly on new buildings construction. Some are employed in sewer construction work. Bricklayers do a considerable amount of alteration work--construction of fire-resistant partitions, store front remodeling, and similar modernization work. They also do a substantial amount of maintenance and repair work.

Bricklayers also work for such industrial establishments as factories making glass or steel, where furnaces and kilns require special fire brick and refractory brick linings.

WORKING CONDITIONS:

The work of the bricklayer is active and sometimes strenuous. It involves stooping to pick up materials, moderately heavy lifting, and prolonged standing. Most work is done outdoors.

HELPFUL HIGH SCHOOL COURSES:

Mechanical drawing
Mathematics- Commercial arithmetic and business math
Blueprint reading
Shop

Bricklayer

Area: Metropolitan Washington Area.

Employment Prospects:

Employment varies seasonally and with the number and types of construction job starts. There is a shortage of bricklayers in Metropolitan Washington area.

Requirements for Apprentice Applicants:

Age: 18 through 30 years.
10th grade

Desirable Qualifications:

Physical fitness and good vision.
Good sense of spatial relations.
Good manual dexterity and eye-hand coordination.

Conditions of Apprenticeship:

Length: 4 years, 40 hours per week.
Wages: Starting: $2.50 hr.
Increases every 6 months.
Journeyman wage: $5.50 per hour
Related Instruction: Institutionalized training 8 weeks and one 3 hour class per week at night throughout the school year.

Where to Apply for Apprenticeship:

Apprenticeship Information Center, 201 6th Street, N.W., Room 329, Washington, D.C. Apply all year round.

or

Bricklayer's #4 JAC
1401 N. Capitol St.
Washington, D.C.

NATURE OF WORK:

Performs both rough and finish work involved in construction and repair of buildings; installation of heavy timbers used in building docks, railroad trestles, and other heavy installations. Makes forms for concrete foundations, frame walls, partitions and roofs; lays subfloorings, applies sheeting to walls, partitions and roofs. Installs window frames and sashes, doors, frames, stairways, wood paneling, cabinets, trim; installs hardware.

TOOLS USED:

The apprentice must furnish his own tools such as hammers, saws, planes, levels, chisels and squares.

WHERE EMPLOYED:

Most work in the construction industry and are employed mainly by contractors and home builders at the construction site, although many are employed on highway or other non-building projects. Some work for government agencies or non-construction firms which employ a separate work force to do their own construction work. Others do maintenance work in large establishments, such as factories, hotels, office buildings, etc.

WORKING CONDITIONS:

Works indoors and out in cooperation with other carpenters and building tradesmen. Frequently works on scaffolds and ladders and in cramped positions; is exposed to dust, dirt, construction noises and varying weather conditions.

HELPFUL HIGH SCHOOL SUBJECTS:

English
Mechanical drawing
Arithmetic - Commercial
Woodshop
Higher mathematics   geometry and algebra
Blueprint reading

Carpenter

Area:

Metropolitan Washington area.

Employment Prospects:

Shortage of carpenters in Metropolitan Washington area.

Requirements for Apprenticeship Applicants:

Age: 18 through 23 years (time extension if veteran or previously in program).

9th grade
Take and successfully pass specific carpenters aptitude test at USES.
Take and successfully pass Brotherhood of Carpenters Apprentice Test.

Desirable Qualifications:

Physical fitness
Good sense of spatial relations and coordination.

Conditions of Apprenticeship:

Length: 4 years - 40 hours per week.
Wages: Starting $2.55 per hour
Related Instruction: 2¼ hours- 2 nights each week.

Where to Apply for Apprenticeship:

Apprenticeship Information Center
201 6th St., N.W. Rm. 329
Washington, D.C.
Or
Joint Carpentry Apprenticeship Committee
1450 Westphalia Road
Upper Marlboro, Maryland

Apply all year round.

NATURE OF WORK:

Finishes exposed concrete surfaces of floors, walls, streets, driveways, etc., to make them strong, durable and relatively water tight. On most concrete building projects this involves hand operations. On highways and other large scale projects cement finishing machines are used extensively, but supplementary hand operations are also necessary, particularly to finish curved surfaces. Obtains special color effects by adding colors to the mix or applies colors in powder form to the surface of the wet concrete before finishing.

TOOLS USED:

Trowels, floats, spreaders, edgers, screeds, grinding and cutting machines, power operated trowels.

WHERE EMPLOYED:

Principally on large buildings, though many are employed on highways or non-building construction. Others work for cement contractors who perform sub-contracting on smaller projects such as sidewalks, driveways, basement floors, and swimming pools.

WORKING CONDITIONS:

Works outside much of the time, sometimes on ladders and scaffolds; subject to dust and dampness, weather conditions; much stopping and kneeling.

HELPFUL HIGH SCHOOL COURSES:

Mechanical drawing
Architectural drafting
Shop courses
Mathematics - Commercial arithmetic

Cement Mason

Area:

Metropolitan Washington area.

Employment Prospects:

Employment is highly seasonal. Openings exist primarily due to replacement needs. Modern techniques have increased the productivity of the individual worker to keep pace with expanding economy.

Requirements for Apprentice Applicants:

Age: 17 through 26 years.
Meet Norms on GATB administered at USES .

Desirable Qualifications for Applicants:

10th grade.
Physical fitness
Sense of spatial relations

Conditions of Apprenticeship:

Length: 3 years - 40 hours per week.
Wage: 65% of journeyman wage
Related Instruction: 2½ hours - 2 nights per week

Where to Apply for Apprenticeship:

Apprenticeship Information Center, 201 6th Street, N. W., Room 329 Washington, D. C. OR, Cement Masons # 891 JAC, 1024 New Jersey Ave., N. W. Washington, D. C.

Apply May through August.

ELECTRICIAN (Inside Wireman)

NATURE OF WORK:

Lays out, assembles, installs and tests electrical fixtures, apparatus, control equipment and wiring used in the light and power systems of buildings or other construction projects. Plans proposed installations from blueprints and specifications. Measures, cuts and installs proper lengths of rigid or flexible conduit, wire, and cable. Splices wires by removing insulation and twisting together wire ends, soldering the connection. Insulates connections. Installs and connects equipment to wiring system, tests circuits.

TOOLS USED:

Hack saw; several sizes of pliers, screwdrivers, and Stillson wrenches; a claw hammer; center punch; a 6-foot ruler; a wood chisel, and an electrician's knife.

WHERE EMPLOYED:

By contractors, usually on new residences, commercial and industrial installations, or on remodeling of existing buildings.

WORKING CONDITIONS:

The electrician usually works in partly completed structures, but may be required to work outside or in cramped quarters. Work requires constant physical activity including lifting of moderate loads, climbing, crawling, pulling, digging, etc. Most work is not on activated electrical systems but he may be required at times to work on energized circuits. Hazards would include shock and burns, falling objects, and falls.

HELPFUL HIGH SCHOOL COURSES:

English
Higher mathematics --Commercial math, algebra and geometry
Mechanical drawing
Drafting or blueprint reading
Physics or electric shop (basic electricity or radio theory)

Other electrical trades in which some joint apprenticeship committees conduct training programs are:

Electrical Motor Repairman--Winder
Neon Sign Electrician
Maintenance Electrician
Inter-communications and Sound
Electronics Technician

Electrician (Inside Wireman)

Area:

Metropolitan Washington Area.

Employment Prospects:

Job prospects in this occupation are expected to be quite good, because of construction.

Requirements for Apprentice Applicants:

Age: 18 to 25 years.
Must be high school graduate or equivalent.
Must qualify through aptitude tests.

Desirable Qualifications for Applicants:

Good eye-hand coordination, physical fitness, no fear of heights and a sense of balance. Mathematical ability. Ability to work with others.

Conditions of Apprenticeship:

Length: 4 years.
Wage: Starting: 40% of journeyman rate.
Related Instruction: A minimum of 144 hours per year.

Where to Apply for Apprenticeship:

Apprenticeship Information Center, 201 6th Street, N.W., Room 329, Washington, D.C.

Apply March through June for class in September.

Or:

Electrical Workers #26 JAC
5034 Wisconsin Ave., N.W.
Washington, D.C.

NATURE OF WORK:

Sets up and operates basic metalworking power tools including the engine lathe, milling machine, planer, shaper, grinding machines, and special machines that have been developed from them. Shapes metals such as brass, aluminum, cast and wrought iron, and various steels to precise dimensions and close tolerances. Fabricates and repairs metal parts, working from blueprints and written specifications. Applies mathematics to all kinds of shop problems, using special charts and tables and precision measuring instruments. Plans work to utilize appropriate machines in the most effective sequence.

TOOLS USED:

Files, chisels, scrapers, scribers, micrometers, calipers, verniers, scales and gauges; milling and boring machines, engine lathes, drill presses and grinders.

WHERE EMPLOYED:

In job shops, production shops, maintenance shops of factories, and tool rooms.

WORKING CONDITIONS:

Shops are usually well lighted and ventilated. Contact with grease and oil may cause allergies. Hazards include flying metal chips, abrasive dust, sharp cutting tools and moving parts.

HELPFUL HIGH SCHOOL COURSES:

Mathematics -Commercial arithmetic
Drafting, mechanical drawing or blueprint reading
Metal shop
Machine shop
Welding
Physics

Machinist

Area:

Metropolitan Washington area.

Employment Prospects:

Limited openings in D.C. area.

Requirements for Apprentice Applicants:

Age: 18 to 23 years.
High school (transcript)
Physical exam.
GATB test administered by Employment Service

Desirable Qualifications for Applicants:

Sense of feel, eye-hand coordination, manual and finger dexterity.

Conditions of Apprenticeship:

Length: 4 years
Wage: Starting: Usually 60% of journeyman wage
Related Instruction: A minimum of 144 hours per year. Classes held during the day and are compensated.

Where to Apply for Apprenticeship:

Apprenticeship Information Center, 201 6th Street, N.W., Room 329, Washington, D.C. OR, Machinists (IAM) Lodge #193 JAC, 1809 Rhode Island Ave., N.E., Washington, D.C.

Apply year round.

NATURE OF WORK:

In a conventional retail market, breaks halves and quarters of carcasses into primal cuts such as chucks, rounds, loins, plates, and ribs, then into retail portions for sale to the customer. Beginning with the less-expensive parts, bones meat and rolls and ties roasts. Learns counter display, merchandising and salesmanship, and how to answer customers' questions concerning meat preparation and cooking.

TOOLS USED:

Hand tools of the trade are usually acquired during training: Various knives, a cleaver, stitching needle, and a sharpening steel. The employer prévides power equipment, linen, and uniforms, if the latter are required.

WHERE EMPLOYED:

In retail markets, supermarkets, and chain stores.

WORKING CONDITIONS:

The meat cutter's work subjects him to sharp temperature changes as he moves from counter to cooler and back. He may wait on customers at the counter in a conventional market or work in the cutting room in a market where a considerable quantity of meat is pre-cut.

NECESSARY HIGH SCHOOL COURSES:

Reading
Writing
Arithmetic

Meat Cutter, Retail

Area:

Metropolitan Washington area.

Employment Prospects:

Possibility fair.

Requirements for Apprentice Applicants:

Age: 18 to 25 years.

Desirable Qualifications for Applicants:

High school graduate
Grocery or market experience
Pleasing appearance and neat and clean.
Physical strength, good hand dexterity
Agility and ability to work in refrigerated rooms.
Sales personality, arithmetic ability.

Conditions of Apprenticeship:

Length: 4 years.
Related Instruction: Trained by individual companies.

Where to Apply for Apprenticeship:

Apprenticeship Information Center, 201 6th Street, N.W., Room 329, Washington, D.C.

Apply year round.

NATURE OF WORK:

Fabricates, shapes, and installs a variety of wood, lumber and plastic products such as cabinets, store fixtures, counter tops, sashes, and frames, using hand tools and wood working machines. Work progresses from detailing to layout, assembly and fitting, finish work and installations.

TOOLS USED:

Handsaws, squares, planes, chisels, gouges, hammers, braces, drill bits, etc. are acquired during the period of apprenticeship. Band saws, jointers, tenoners, mortisers, molders, planers, shapers and other power machines are extensively used, although usually owned or furnished by employer.

WHERE EMPLOYED:

By planing mills, millwork and cabinet shops, sash and door plants, furniture factories, and store fixture manufacturers.

WORKING CONDITIONS:

Exposure to dust, noise and vibration of machinery are part of work environment. Hazards include cuts from power cutting equipment, sprains from lifting.

HELPFUL HIGH SCHOOL COURSES:

Mathematics - Commercial arithmetic and geometry
Drafting, mechanical drawing
Wood shop
Blueprint reading

Millman- Cabinet Maker

Area:

Metropolitan Washington area.

Employment Prospects:

Included under carpenter's union. Employment opportunity good.

Requirements for Apprentice Applicants:

Age: 18 to 25 years.

Desirable Qualifications for Applicants:

Familiarity with wood working tools and equipment, drawings and blueprints. Some knowledge of lumber. Basic mathematics and good sense of spatial relations. Mechanical dexterity and eye-hand coordination.

Conditions of Apprenticeship:

Length: four years
Wage: Starting: $2.55 per hour
Related Instruction: 144 hours per year at night school.

Where to Apply for Apprenticeship:

Apprenticeship Information Center, 201 6th Street, N.W., Room 329, Washington, D.C.

Apply year round.

or

Joint Carpentry Apprenticeship Committee, 1450 Westphalia Road, Upper Marlboro, Maryland.

NATURE OF WORK:

The job involves the operation, maintenance and repair of so many different types of power-driven construction equipment that it has been separated into four different occupations in which apprentices are trained.

GRADING AND PAVING EQUIPMENT OPERATOR:

Operates and maintains earthmoving equipment typical in the construction of highways, earth fill dams, canal work, and large-scale earth leveling jobs. Machinery includes metal track and rubber tired tractors, fork lifts, air compressors, bull dozers, graders, scrapers, and paving machines.

HEAVY DUTY REPAIRMAN:

Maintains and repairs heavy equipment, including gasoline and diesel engines, both in the shop and at the construction site. Some shops are equipped to completely overhaul the equipment; in others it is the practice to remove defective parts and replace with new or factory-rebuilt items. Welding and burning are day-to-day duties.

PLANT EQUIPMENT OPERATOR:

Operates and maintains equipment in gravel and asphalt paving plants. Operates conveyor systems to transfer and proportion materials in the manufacture of bituminous paving. May also be responsible for mechanical repair of the machinery. May operate equipment such as loaders and bulldozers.

UNIVERSAL EQUIPMENT OPERATOR:

Operates and maintains machinery involved in the use of a boom, such as dragline, back hoe, and dipper type shovels. While many of these pieces are crawler type, a substantial portion of the work includes truck mounted machinery. A chauffeur's license is normally required.

TOOLS USED:

Hammers, chisels, pliers, wrenches, bars, screw drivers, and punches.

WHERE EMPLOYED:

Most are employed on construction work by contractors engaged in highway, dam, airport, and other large-scale engineering projects. On building projects, they are employed in excavating, grading, landscaping and in hoisting concrete, steel, and other building materials. Others are employed by utility companies, manufacturers and by State and local public works and highway departments.

WORKING CONDITIONS:

Most work is in outlying areas udergoing development. Workers must be prepared to meet extremes of weather in desert, mountain, and coastal areas. Many jobs in remote areas require temporary residence away from home, or moving to living quarters near the job site. Accommodations are often inadequate or nonexistent near jobs, requiring the worker to commute considerable distances. Work is dangerous, even though many safety precautions are observed.

Operating Engineer

HELPFUL HIGH SCHOOL COURSES:

Auto Shop
Commercial Math
Machine Shop
Physics
Mathematics
Business Arithmetic

Area:

Metropolitan Washington area.

Employment Prospects:

Employment is tied to highway and building construction. And is somewhat seasonal.

Requirements for Apprentice Applicants:

Age: 18-24 years.
High school graddate (transcript required).
Physical - GATB (administered by USES).
Citizen of United States.

Conditions of Apprenticeship:

Length: 3 years, 40 hours per week
Wage Starting $2.80

Where to Apply for Apprenticeship:

Apprenticeship Information Center, 201 6th Street, N.W. Room 329, Washington, D.C. OR, Operating Engineers #77 JAC, 1311 L St., N.W. Washington, D.C.

January to March 15th-date of application.

NATURE OF WORK:

Prepares surfaces for painting by sanding, puttying, scraping, or by using paint remover or a blow torch. Applies paint with brushes, rollers and spray guns. Mixes paint, varnish, lacquers and matches colors by combining pigment, base and thinner.

TOOLS USED:

Brushes, spray guns, rollers, scrapers.

WHERE EMPLOYED:

By painting and decorating contractors on new construction and in renovating existing structures.

WORKING CONDITIONS:

Work may be seasonal and influenced by weather conditions. Works inside and out, stands for long periods, climbs ladders, stoops, bends, is exposed to fumes from paint and sprays and skin irritation from thinners. Falls from ladders and scaffolds cause most injuries.

HELPFUL HIGH SCHOOL COURSES:

Art
Chemistry
Paint shop
Wood shop

Painter & Decorator

Area:

Metropolitan Washington area.

Employment Prospects:

Fair in D.C. area.

Requirements for Apprentice Applicants:

Age: 17 to 26 years.
10th Grade completion
Test administered by USES

Desirable Qualifications for Applicants:

Ability to work at heights and a sense of balance.
Physical fitness.

Conditions of Apprenticeship:

Length: 3 years, 40 hours per week
Wage: Starting: 50% of journeyman rate
Related Instruction: A minimum of 144 hours per year at night school.

Where to Apply for Apprenticeship:

Apprenticeship Information Center, 201 6th Street, N.W., Room 329, Washington, D.C. OR, Painter's District Council #51 JAC, 715 Eye St., N.E. Washington, D.C.

May 15th to June - date of application.

NATURE OF WORK:

Fabricates, assembles, installs and maintains industrial and comfort heating, instrumentation and control piping. May use a variety of welding processes in performing welding operations. Work may include rigging operations.

TOOLS USED:

Wrenches, reamers, drills, braces and bits, hammers, chisels, saws, and other handtools; power machines, hand-operated hydraulic pipe benders, gas or gasoline torches and welding, soldering, and brazing equipment.

WHERE EMPLOYED:

By pipefitting contractors in new building construction, mainly at the construction site; as maintenance personnel in the petroleum, chemical and food-processing industries.

WORKING CONDITIONS:

Work is strenuous and may involve heavy lifting, pulling and pushing. It may require standing for long periods or cramped and uncomfortable positions. Risks include falls from ladders, cuts from sharp tools, burns from hot pipes or steam.

HELPFUL HIGH SCHOOL COURSES:

Mathematics, including algebra and geometry
Machine or forge shop
Drafting
Mechanical drawing or blueprint reading

Pipefitter

Area:

Metropolitan Washington area.

Employment Prospects:

Need for qualified applicants.

Requirements for Apprentice Applicants:

18 to 25 years.
High school graduate
Test (administered by USES)

Desirable Qualifications for Applicants:

Physical fitness and mental alertness.
Mathematical ability above average
Manual coordination and eye-hand coordination.

Conditions of Apprenticeship:

Length: 5 years
Wage: Starting: 45% of journeyman wage.
Related Instruction: A minimum of 144 hours, public and private classes, three nights per week

Where to Apply for Apprenticeship:

Apprenticeship Information Center, 201 6th Street, N.W., Room 329, Washington, D.C. Or, Pipefitters #602 JAC, 809 Maryland Ave., N.E. Washington, D.C.

Apply March 15th to May 15th.

PLUMBER

NATURE OF WORK:

Lays out, assembles, and installs pipes, fittings, and fixtures for air, gas, water, steam, and waste disposal systems. Cuts openings in walls, ceilings, and floor for pipe; cuts, reams, threads, and welds pipe. Installs water closets, bathtubs, showers, water heaters, boilers, and other domestic or industrial fixtures. Tests pipe systems and installations for leaks or improper operation. Works from blueprints and isometric drawings.

TOOLS USED:

Pipe wrenches, cutters, dies, blow torches, fire pots, and soldering irons. May use acetylene gas and arc welding equipment.

WHERE EMPLOYED:

By plumbing contractors on repair or service jobs, and on new construction, both residential and commercial.

WORKING CONDITIONS:

Works inside and outside, alone and with others. Some heavy lifting, pushing and pulling. May work on ladders and scaffolds. May work in cramped positions in restricted areas. Hazards include injuries from falls or falling materiels, burns from molten lead, hot pipes or steam.

HELPFUL HIGH SCHOOL COURSES:

Mathematics -Commercial arithmetic and business math
Mechanical drawing
Drafting or blueprint reading
English

Plumber

Area:

Metropolitan Washington area.

Employment Prospects:

Good.

Requirements for Apprentice Applicants:

18 to 24 years.
High school graduate
Test (administered by USES)

Desirable Qualifications for Applicants:

Physical fitness and mental alertness
Mathematical ability above average
Manual coordination and eye-hand coordination

Conditions of Apprenticeship:

Length: 5 years.
Wage: Starting 40% of journeyman wage
Related Instruction: A minimum of 215 hours private classes sponsored by union.

Where to Apply for Apprenticeship:

Apprenticeship Information Center, 201 6th Street, N.W., Room 329, Washington, D.C. or, Plumber's #5 JAC, 3628 12th Street, N.E., Washington, D.C.

March 15th to May 15th, dates of application.

BOOKBINDER
BINDERYWOMAN

NATURE OF WORK:

Performs a variety of functions such as paper cutting, folding, jogging, perforating, round cornering, drilling and punching, and stitching, etc. These operations may be performed by hand or through use of power equipment.

Binderywoman performs lighter tasks such as gathering, hand folding, hand numbering, collating, stitching, wrapping, labeling, tying, binding, stapling, etc. Some operations are hand and others machine.

TOOLS USED:

Punches, folders, perforators, stitchers, power cutters.

WHERE EMPLOYED:

In edition and pamphlet binderies, trade or job binderies, blankbook and looseleaf binderies; bindery departments of large book, periodical and commercial printing plants and large libraries.

WORKING CONDITIONS:

Works in crowded, well-lighted and ventilated rooms. Some pushing and pulling required. Exposed to noise and hazards of operating machines.

HELPFUL HIGH SCHOOL COURSES:

Arithmetic - Business Math
English
Art
Print Shop
Typing

PRINTING OCCUPATIONS

COMPOSITOR

NATURE OF WORK:

Lays out copy. Sets type by hand or by use of type setting machines for printing articles, newspapers and other types of printed matter. Assembles news, ads or commercial forms by arranging metal components or by paste-makeup process for offset lithographic printing. Makes proof copy by hand or with a proof press and inspects proof for typographical or other errors; locks up type for presses or reproduction proofs, redistributes type into type case on completion of job. May expose and develop film and transfer image to paper and/or plates as required. Compositor and Typographer are sometimes used interchangeably. However, a Typographer is confined to fine hand work. The generally recognized over-all occupational title is "PRINTER".

WHERE EMPLOYED:

In commercial printing plants, newspapers and manifolding plants.

WORKING CONDITIONS:

Works inside. Some heavy lifting required.

HELPFUL HIGH SCHOOL COURSES:

Print Shop
Art Design
Spelling
Journalism
Physical Sciences
Arithmetic - Commercial
English
Typing
Electronics
Chemistry

PRINTING OCCUPATIONS

PHOTOENGRAVER

NATURE OF WORK:

Performs any of a variety of tasks in the preparation of copper, aluminum and zinc plates used in printing, particularly in half-tone reproduction work. Photographs illustration material to prepare negatives that are used in etching plates. Etches photographically printed plates with acid. Corrects imperfections. Nails prepared plates to wooden blocks.

WHERE EMPLOYED:

In commercial photoengraving shops, newspapers, rotogravure shops, and large commercial printing plants.

WORKING CONDITIONS:

Works under artificial lighting. Much dark room work. Work is close (use of magnifying lenses) and detailed. Exposed to chemicals and noxious fumes.

HELPFUL HIGH SCHOOL COURSES:

Chemistry
Photography
Drafting
Typing

Photoengraver

Area:

Metropolitan Washington area.

Employment Prospects:

Entry into trade most difficult, but turnover is extremely low. Applicant is placed on waiting list.

Requirements for Apprentice Applicants:

Age: 18 through 25 years.
Physical examination
High school graduate
GATB taken at USES

Desirable Qualifications for Applicants:

Physical fitness
Good visual acuity

Conditions of Apprenticeship:

Length: Six years
Wage: Starting 42.5% of journeyman wage
Related Instruction: A minimum of 144 hours per year in the industry; class in printing and graphic arts, two nights per week.

Where to Apply for Apprenticeship:

Apprenticeship Information Center, 201 6th Street, N.W., Room 329, Washington, D.C. or Columbia Typographical Union #101 JAC, 1030 15th Street, N.W., Room 1020, Washington, D.C.

All year round.

PRINTING OCCUPATIONS

PRESSMAN

NATURE OF WORK:

The basic job is to do the make-ready work and tend the operation of the printing presses. This includes setting and positioning the type forms on the press, setting and adjusting ink fountains and rollers, setting automatic paper feeders, running proof sheets, and then tending the press in its operation. When running color work he must closely check the registering to meet color specifications.

Depending upon the shop, he may operate platen, cylinder, offset or web presses.

May do camera and darkroom work, and make surface plates.

WHERE EMPLOYED:

In pressrooms of commercial printing plants and newspapers.

WORKING CONDITIONS:

Pressrooms are noisy; work may be dirty; heavy type forms and printing press plates must be lifted. Hazards of working around high speed machinery are present.

HELPFUL HIGH SCHOOL COURSES:

Print Shop
Art
English
Science
Chemistry
Typing

PRINTING OCCUPATIONS

STEREOTYPER (NEWSPAPER)

NATURE OF WORK:

Makes duplicate press plates from the metal type forms prepared in the composing room. Most volume printing requires the use of duplicate plates so several presses can be used at the same time. Stereotypers make molds or mats of papier-mache or wood fibre, impress type and cuts on the mats to form a matrix, trim the matrix, pour molten metal into the impressed mat to form a plate. They route and trim the plate to prepare it for printing. They operate various types of power equipment, including autoplate, plate finishing, cooling and drying machines.

WHERE EMPLOYED:

By newspapers and large commercial printing plants.

WORKING CONDITIONS:

Some lifting of relatively heavy, hot press plates is required. Workers are exposed to considerable heat and hazards include burns from molten lead.

HELPFUL HIGH SCHOOL COURSES:

Chemistry
Print Shop
Typing

REINFORCING IRON WORKER
(RODMAN)

NATURE OF WORK:

Positions and secures steel bars and mesh in concrete forms to reinforce concrete. Determines number, sizes, shapes and locations of reinforcing rods from blueprints, sketches, or oral instructions. Selects and places rods in forms, spaces and fastens them together.

TOOLS USED:

Wire and pliers, hacksaw, bar cutters, and acetylene torch. May use rod bending machine.

WHERE EMPLOYED:

The great majority of work is mainly on new buildings construction, although many are employed on highway and/or other non-building projects (pavements, patios, etc.).

WORKING CONDITIONS:

Works outside most of the time, sometimes on ladders and scaffolds; subject to all weather conditions; hard, heavy and laborious work, above average physical strength and agility are necessary.

HELPFUL HIGH SCHOOL COURSES:

Architectural Drafting
Mathematics (Commercial Arithmetic)
Mechanical Drawing
Shop Courses

Area:

Metropolitan Washington area.

Employment Prospects:

Employment is seasonal. Opening exist primarily due to replacement needs. Modern techniques have increased the productivity of the individual worker to keep pace with expanding economy.

Requirements for Apprentice Applicants:

Age: 18 through 25 (Copy of birth certificate)
High School Graduate
Bell & Associates Test

Desirable Qualifications for Applicants:

A good sense of balance, no fear of heights, good eye-hand coordination.
Ability to work with others.

Conditions of Apprenticeship:

Length: 3 years
Wage: 60% of journeyman rate
Related Instruction: A minimum of 144 hours/year

Where to Apply for Apprenticeship:

Bell & Associates, Suite 310
1101 - 17th Street, N.W.
Washington, D.C.

or

Apprenticeship Information Center
201 6th Street, N.W., Room 329
Washington, D.C.

Apply May 1st through May 13th.

NATURE OF WORK:

Lays out, cuts, forms, fabricates, assembles, and installs sheet metal items, such as ducts, blowers, gutters, downspouts, flashings and skylights, in building construction and alteration for heating, ventilating, and air conditioning. Fabricates and installs stainless steel kitchen, restaurant, and soda fountain equipment, partitions and shelves. Constructs electric signs and does sheet metal work for other industrial and architectural purposes. Working from blueprints lays out the work, cuts the metal, forms the metal, then welds, bolts, rivets, solders, or cements the seams and joints as required.

TOOLS USED:

Hand and power operated shears, brakes, hammers and anvils.

WHERE EMPLOYED:

Mainly in the construction industry, by contract or job shops, making and installing all types of sheet metal equipment.

WORKING CONDITIONS:

Works alone and with others inside and outside on the job and in the shop. Stands, walks, climbs around benches, machines, and buildings where work is done. Sometime works from high ladders and scaffolding. Subject to noise and hazards of cutting, burning, and falling.

HELPFUL HIGH SCHOOL COURSES:

Mathematics through Trigonometry
Mechanical drawing
Drafting
Metal Shop
Blueprint Reading

Sheet Metal Worker

Area:

Metropolitan Washington Area.

Employment Prospects:

Need for qualified applicants.

Requirements for Apprentice Applicants:

Age: 18 to 23 years.
Physically capable to work at heights, indoors and outdoors.
GATB administered at USES.

Desirable Qualifications for Applicants:

High school graduate.
Ability with spatial relations, eye-hand coordination and manual dexterity.

Conditions of Apprenticeship:

Length: 4 years.
Wage: Starting: 45% of journeyman wage.
Related Instruction: A minimum of 144 hours per year. Classes at night.

Where to Apply for Apprenticeship:

Apprenticeship Information Center, 201 6th Street, N.W., Room 329, Washington, D.C., or, Sheet Metal Workers #102 JAC, 2703 Bladensburg Road, N.E., Washington, D.C.

Apply March 15th through May 15th.

SPRINKLER & FIRE CONTROL FITTER, AUTOMATIC

NATURE OF WORK:

Installs, services and repairs piping and fixtures used in fire sprinkler systems, including hydrants, pumps, sprinkler heads and alarms.

TOOLS USED:

Hammers, chisels, hand wrenches, screwdrivers and pliers. Operates pipe threading and cutting tools and pipe benders.

WHERE EMPLOYED:

By contractors who specialize in installation of fire sprinkler systems.

WORKING CONDITIONS:

Works inside ordinarily (occasionally outdoors on underground installations) as part of a crew. Hard, heavy, and laborious work. May work at heights and on scaffolds and ladders.

HELPFUL HIGH SCHOOL COURSES:

Mathematics - Commercial arithmetic, business math and algebra
Physics
Chemistry
Blueprint reading, mechanical drawing, or drafting
Welding Shop

Automatic Sprinkler & Fire Control

Area:

Metropolitan Washington area.

Employment Prospects:

Included under steamfitters.

Requirements for Apprentice Applicants:

Age: 18 through 24 years.
High school graduate (transcript required).
Must pass aptitude test administered by USES.

Desirable Qualifications for Applicants:

Physical fitness
Eye-hand coordination
Ability to work at heights and sense of balance

Conditions of Apprenticeship:

Length: 5 years, 40 hours per week
Wages: Starting: 45% of journeyman wage.
Related Instruction: A minimum of 144 hours per year. Classes held at night.

Where to Apply for Apprenticeship:

Apprenticeship Information Center, 201 6th Street, N.W., Room 329, Washington, D.C., or Pipefitters #602 JAC, 809 Maryland Ave., N.E., Washington, D.C.

Apply March 15th to May 15th.

NATURE OF WORK:

Operates and services the machinery which powers industry, lights cities, and controls the climate of large buildings. His primary responsibility is the safe operation and maintenance of all kinds of steam boilers, ranging from small units, just over a foot in diameter, to huge steamplant boilers, over two stories high. Operating pressures in these boilers may range from less than 15 pounds to over 450 pounds per square inch. He also looks after such other equipment as heat exchangers, pumps, motors, turbines, generators, air compressors, air-conditioning units, and refrigeration equipment.

TOOLS USED:

Power tools, testing equipment, and special tools such as soldering irons, dies, and taps, are furnished by the employer. Some establishments require the engineer to supply his own hand tools. An apprentice usually starts with the basic tools of the trade, and builds up a full kit as he progresses in his training.

WHERE EMPLOYED:

Because power, light, and heat are required by all kinds of firms, stationary engineers work in every kind of industry and firm: from meat packing plants to government shipyards; from oil refineries to dry cleaning plants; and from hospitals to department stores. Some are employed in hotels, large office and department buildings, schools and colleges.

WORKING CONDITIONS:

Generally, work areas are clean, well lighted and ventilated. Working near boilers and moving machinery, he risks burns, electric shocks, and other injuries. Physical requirements are rigorous, requiring stooping, bending, squatting, crawling into cramped quarters, working from catwalks high above the floor; may lift heavy parts without mechanical aid. Because the engineer may work alone, and because of his responsibility for safe operation of potentially dangerous equipment, a person with diabetes, heart trouble, epilepsy, or other potentially disabling conditions will seldom be employed.

HELPFUL HIGH SCHOOL COURSES:

Algebra
Geometry
Physics
Chemistry
Machine shop
(High school graduation required.)

Stationary Engineer

Area:

Metropolitan Washington area.

Employment Prospects:

Not seasonal. Need for qualified applicants in D.C.

Requirements for Apprentice Applicants:

Age: 18 through 25 years.
High school graduate
Test administered by JAC (consists of mathematics)

Conditions of Apprenticeship:

Length: Four years (48 months)
Wage: Starting $2.20 hour
Related Instruction: A legal requirement of 144 hours per year. Night classes two times per week.

Where to Apply for Apprenticeship:

Apprenticeship Information Center, 201 6th Street, N.W., Room 329, Washington, D.C. or Stationary Engineer #99 JAC, 1311 L Street, N.W., Suite 400, Washington, D.C.

Apply after May 1st.

TRUCK MECHANIC

NATURE OF WORK:

Insures proper preventive maintenance and efficient operation of trucks and buses, ranging in size from quarter ton to diesel rigs of many tons. Repairs both diesel and gasoline vehicles, although there is a tendency to specialize in one or the other after completion of training. May do complete overhauls or may specialize in repair of electrical systems, ignitions, transmissions, brakes, or motors. Determines cause of trouble by driving the vehicle, using special testing devices, or by listening while vehicle is stationary with various parts moving. Shapes replacement parts on an engine lathe; grinds valves; operates a drill press, cylinder boring bar, or piston grinding machine; may weld or braze. Sometimes estimates cost of repairs.

TOOLS USED:

Basic hand tools are furnished by the mechanic, power tools by the employer. A variety of equipment is used, including jacks, wheel aligning instruments, gages, dynamometers, grinding wheels, tire tools and greasing guns, and chain or hydraulic hoists to lift and move heavy units.

WHERE EMPLOYED:

In independent garages; in maintenance shops of large organizations which service their own fleets, such as trucking and bus companies, taxicab firms, bakeries, dairies and government garages; and in the service departments of truck dealers.

WORKING CONDITIONS:

Most mechanics work indoors but sometimes perform emergency roadside repairs. Work is dirty and greasy; atmosphere is noisy. Hazards include exposure to noxious fumes, injuries to fingers and hands, possibility of electrical shock from ignition systems and burns from hot surfaces of motors and exhaust pipes. Possible injury to the eyes may result from flying particles or filings if protective goggles are not worn when using power grinding or drilling machines. The mechanic should be reasonably husky with strong hands and arms. The job entails much handling of small tools and the ability to feel the smoothness of valves and gears. Normal eyesight is required to distinguish the various parts, tools, and equipment, to read gages, to observe the operation of the engine, and to drive the vehicle on test runs. Hearing must be acute for high pitched sounds. Applicants are usually required to pass an aptitude test which includes finger and hand dexterity and hand and eye coordination.

HELPFUL HIGH SCHOOL COURSES:

Mathematics -Business arithmetic
Auto shop
Metal shop
Machine shop
Physics
Electricity

UPHOLSTERER

NATURE OF WORK:

Repairs and rebuilds upholstered furniture, using hand tools and knowledge of fabrics and upholstery methods. Removes covering, webbing and padding from seat, arms, back and side of work piece. Removes defective springs by cutting cords or wires that hold them in place. Replaces webbing and springs, measures and cuts new material, installs material of furniture piece.

TOOLS USED:

Tack puller, chisel, mallet. May operate sewing machine. May refinish some wooden surfaces.

WHERE EMPLOYED:

Usually in well-lighted but crowded small shops. These shops usually do work for major department stores.

HELPFUL HIGH SCHOOL COURSES:

Upholstery
Woodshop
Mechanical Drawing

Upholsterer

Area:

Metropolitan Washington area.

Employment Prospects:

Not seasonal. Need for qualified applicants in D.C.

Requirements for Apprentice Applicants:

Age: 18 years - 23 years
Tenth grade preferred
Good spatial and co-ordination on GATB
D.C. driver's license

Conditions of Apprenticeship:

Length: 3 years
Wage: Starting 1.50 hour
Related Instruction: Given on-job-training

Where to Apply for Apprenticeship:

Apprenticeship Information Center
201 6th Street, N.W, Room 329
Washington, D.C.

Apply year round.

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